DEPARTMENT OF ECOLOGY

November 16, 2012

TO: Russ McMillan, Toxicologist, TCP

FROM: Arthur Buchan, Toxicologist, TCP

SUBJECT: Ecological Risk Assessment for Placement of Dredged Sediment Material Upland

The purpose of this memorandum is to document an interpretation from the Department of Ecology regarding the placement of dredged sediment material from a Model Toxics Control Act (MTCA) site to upland soils, specifically as it pertains to Ecological Risk Assessment and the Terrestrial Ecological Evaluation (WAC 173-340-7490 through 7494).

The Concise Explanatory Statement for the Amendments to the Model Toxics Control Act, Cleanup Regulation, Chapter 173-340 WAC (2001) [GQ 14.1.3] asks, "Could the terrestrial ecological evaluation procedures create an incentive to cause harm through the destruction of habitat." Although this question does not directly relate to the specific question asked, the response states that, "A cleanup action cannot be selected unless a determination is made that each of the minimum requirements in WAC 173-340-360(2) is met, including the requirements that the cleanup action protects the environment and uses permanent solutions to the maximum extent practicable." Furthermore, it states that "One of the criteria that must be considered as part of that analysis is the overall protectiveness of the environment. See WAC 173-340-360(3) (f)." As a result, it appears the dredged sediment material may be placed upland (according to MTCA regulations, WAC 173-340-7490 through 7493) as long as the following conditions have been met:

1. The dredged material is from a MTCA site.
2. The site chosen for disposal is either excluded from a Terrestrial Ecological Evaluation, or
    a. The contaminant levels are below Table 749-2 (intended disposal site would be designated as a simplified evaluation site), and (see 3)
    b. The contaminant levels are below Table 749-3 (intended disposal site would be designated site-specific evaluation site), and (see 3)

Note: Methods listed in WAC 173-340-7493(3) (a) through (g) may be used in place of the screening level tables described above.

3. The dredged material will not cause negative environmental impacts to the intended disposal site. Negative environmental impacts could occur when the placement of non-contaminated dredged material results in negative effects on native species. Examples of negative effects include (but are not limited to):
    a. Oxygen depletion
    b. Acidification
    c. Saline enrichment
    d. Siltation runoff

e. Grain size
f. Direct mortality of intact vegetation through burying
g. Bare soil replacing a riparian buffer area. Riparian buffers provide the following ecological functions:

    1. Water quality maintenance
    2. Fine sediment control
    3. Large woody debris (LWD) delivery and retention
    4. Microclimate moderation
    5. Nutrient delivery and retention
    6. Fish and wildlife habitat creation and maintenance
    7. Hydrology/slope stability

Please note, this memorandum only covers WAC 173-340-7490 through 7494 and that all other applicable rules and regulations still apply.

Should you have any questions, please contact me at (360) 407-7146 or Arthur.buchan@ecy.wa.gov.